Listing of Claims

Claim 1 (Currently Amended): A method of receiving a packet containing a plurality of data symbols, said method being performed in a receiver connected to a plurality of antennas containing a first antenna and a second antenna, said method comprising:

generating a corresponding plurality of parameters by examining a respective signal portion received on each of said plurality of antennas, wherein said signal portion corresponds to a non-payload portion of said packet, said corresponding plurality of parameters comprising a first plurality of parameters and a second plurality of parameters respectively corresponding to said first antenna and said second antenna;

selecting one of said plurality of antennas based on said corresponding plurality of parameters; and

receiving a payload portion of said packet on said one of said plurality of antennas,

wherein each of said parameters has a corresponding value for each of a plurality of sub-portions of the respective signal portion received on each of said plurality of antennas~~.~~,

wherein a first parameter contained in each of said corresponding plurality of parameters comprises a correlation value, and a second parameter contained in each of said corresponding plurality of parameters comprises a strength of said signal, said correlation value representing the similarity of said signal portion with a corresponding expected signal according to a pre-defined protocol,

wherein said generating comprises determining a gain factor necessary to amplify said signal portion to a first voltage level, wherein said strength is determined based on said gain factor,

wherein said plurality of antennas comprise only said first antenna and said second antenna, wherein said gain factor for said first antenna and said second antenna is respectively represented by AGC1 and AGC2 on a dB scale, wherein T1 and T2 represent a first threshold and a second threshold,

if a difference in said AGC1 and said AGC2 values is large compared to T1, selecting the antenna having a lower value of said AGC1 and said AGC2;

if the absolute value of said difference between AGC1 and AGC2 values is small, selecting one of said first antenna and said second antenna having a value close to $\mu\infty$ if the

correlation value of the other one of said two antennas is away from $\mu\infty$, wherein $\mu\infty$ represents a mean of Gaussian distribution when SNR of said signal is high;

if said AGC1 and said AGC2 are equal, and if said AGC1 and said AGC2 are high, then selecting one of said first antenna and said second antenna having a correlation value closer to $\mu\infty$; and

if said AGC1 and said AGC2 values are equal, and if said AGC1 and said AGC2 are low, selecting one of said first antenna and said second antenna having a higher correlation value.

Claim 2: (Canceled)

Claim 3 (Currently Amended): The method of claim ~~2~~ 1, wherein said generating generates a sequence of digital values corresponding to said signal portion, and wherein said corresponding expected signal is represented by a sequence of expected values according to a spread sequence protocol.

Claim 4 (Previously Presented): The method of claim 3, wherein said sequence of expected values comprises a spread spectrum sequence.

Claim 5 (Previously Presented): The method of claim 4, wherein said spread spectrum sequence comprises a Barker sequence.

Claim 6: (Cancelled)

Claim 7: (Cancelled)

Claim 8 (Currently Amended): A receiver for receiving a packet containing a plurality of data symbols, said receiver being connected to a plurality of antennas, said receiver comprising:

a parameters generation block generating a corresponding plurality of parameters by examining a respective signal portion received on each of said plurality of antennas, wherein each of said respective signal portion corresponds to a non-payload portion of said packet, said corresponding plurality of parameters comprising a first plurality of parameters and a second

plurality of parameters respectively corresponding to said first antenna and said second antenna; and

a selector block selecting one of said plurality of antennas based on said corresponding plurality of parameters, wherein a payload portion of said packet is received on said one of said plurality of antennas,

wherein each of said parameters has a corresponding value for each of a plurality of sub-portions of the respective signal portion received on each of said plurality of antennas~~.~~

wherein a first parameter contained in each of said corresponding plurality of parameters comprises a correlation value, and a second parameter contained in each of said corresponding plurality of parameters comprises a strength of said signal, said correlation value representing the similarity of said signal portion with a corresponding expected signal according to a pre-defined protocol,

wherein said parameters generation block determines a gain factor necessary to amplify said signal portion to a first voltage level, wherein said strength is determined based on said gain factor in performing said generating,

wherein said plurality of antennas comprise only said first antenna and said second antenna, wherein said gain factor for said first antenna and said second antenna is respectively represented by AGC1 and AGC2 on a dB scale, wherein T1 and T2 represent a first threshold and a second threshold,

if a difference in said AGC1 and said AGC2 values is large compared to T1, selecting the antenna having a lower value of said AGC1 and said AGC2;

if the absolute value of said difference between AGC1 and AGC2 values is small, selecting one of said first antenna and said second antenna having a value close to $\mu\infty$ if the correlation value of the other one of said two antennas is away from $\mu\infty$, wherein $\mu\infty$ represents a mean of Gaussian distribution when SNR of said signal is high;

if said AGC1 and said AGC2 are equal, and if said AGC1 and said AGC2 are high, then selecting one of said first antenna and said second antenna having a correlation value closer to; and

if said AGC1 and said AGC2 values are equal, and if said AGC1 and said AGC2 are low, selecting one of said first antenna and said second antenna having a higher correlation value.

Claim 9: (Canceled)

Claim 10 (Currently Amended): The receiver of claim ~~9~~ 8, wherein said parameters generation block generates a sequence of digital values corresponding to each of said respective signal portion, and wherein said corresponding expected signal is represented by a sequence of expected values according to a spread sequence protocol.

Claim 11 (Original): The receiver of claim 10, wherein said sequence of expected values comprises a Barker Sequence.

Claim 12: (Canceled)

Claim 13 (Currently Amended): The receiver of claim ~~12~~ 11, further comprising a switch coupled to all of said plurality of antennas, said switch connecting said selected one of said plurality of antennas to an end of a path under the control of said selector block.

Claim 14 (Previously Presented): The receiver of claim 13, further comprising:

an amplifier amplifying said signal portion received by said one of said plurality of antennas to generate an amplified signal;

an analog to digital converter (ADC) sampling said amplified signal to generate a sequence of sampled bits;

a match filter examining said sequence of sampled bits to generate an encoded bit.

Claim 15 (Original): The receiver of claim 14, wherein said first voltage level is determined by a range of operation of said ADC.

Claim 16 (Original): The receiver of claim 14, wherein said amplifier, said ADC and said matching filter are connected in another end of said path.

Claim 17 (Original): The receiver of claim 14, wherein said matching filter comprises a Barker match filter.

Claim 18 (Currently Amended): A device receiving a packet containing a plurality of data symbols, said device comprising:

a first antenna and a second antenna, each receiving a same signal containing a non-payload portion and a payload portion;

a receiver coupled to said plurality of antennas, said receiver comprising:

means for generating a first parameter and a second parameter by examining said non-payload portion received via said first antenna, and a third parameter and a fourth parameter by examining said non-payload portion received via said second antenna, wherein each of said first parameter and said third parameter representing a respective correlation of said non-payload portion with a corresponding expected signal, said ~~third~~ second parameter and said fourth parameter representing a respective strength of said signal received via said first antenna and said second antenna;

means for selecting one of said plurality of antennas based on said first parameter, said second parameter, said third parameter and said fourth parameter; and

means for receiving a payload portion of said packet on said one of said plurality of antennas~~.~~,

wherein said means for generating determines a gain factor necessary to amplify said signal portion to a first voltage level, wherein said strength is determined based on said gain factor,

wherein said gain factor for said first antenna and said second antenna is respectively represented by AGC1 and AGC2 on a dB scale, wherein T1 and T2 represent a first threshold and a second threshold,

if a difference in said AGC1 and said AGC2 values is large compared to T1, selecting the antenna having a lower value of said AGC1 and said AGC2;

if the absolute value of said difference between AGC1 and AGC2 values is small, selecting one of said first antenna and said second antenna having a value close to $\mu\infty$ if the correlation value of the other one of said two antennas is away from $\mu\infty$, wherein $\mu\infty$ represents a mean of Gaussian distribution when SNR of said signal is high;

if said AGC1 and said AGC2 are equal, and if said AGC1 and said AGC2 are high, then selecting one of said first antenna and said second antenna having a correlation value closer to; and

if said AGC1 and said AGC2 values are equal, and if said AGC1 and said AGC2 are low, selecting one of said first antenna and said second antenna having a higher correlation value.

Claim 19: (Canceled)

Claim 20 (Currently Amended): The device of claim ~~19~~ 18, wherein said means for generating generates a sequence of digital values corresponding to said signal portion, and wherein said corresponding expected signal is represented by a sequence of expected values according to a spread sequence protocol.

Claim 21 (Original): The device of claim 20, wherein said sequence of expected values comprises a Barker Sequence.

Claim 22: (Canceled)

Claim 23: (Canceled)

Claim 24 (Previously Presented): The method of claim 1, wherein each of said plurality of sub-portions represents a corresponding one of said plurality of data symbols encoded in said signal portion.